

# Portable Space Heaters

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## University of Tennessee Safety Guide GS-030

**Document Contact:** EHS-General Safety

**Date effective:** February 1, 2014

**Revision Date:** November 1, 2015

### Purpose

The purposes of these guidelines are to ensure that portable space heaters do not create a hazard to facility, employees, visitors or students.

### Scope and Applicability

These guidelines shall apply to all portable space heaters used to provide additional heat and comfort over and above the facility's heating system. Unfortunately, the use of these heaters increases the risk of fire and personal injury. Employees cannot use portable space heaters unless they have completed an energy exemption form and it is approved by Facilities Services. Portable space heaters are a temporary solution, and not a permanent solution, to supplement the space's heating needs.

To apply for an exemption, an **Environmental Exemption Request Form** must be completed. This form may be downloaded online at <http://fs.utk.edu/Resources-nav/Forms.html> or requested by phone at 946-7777.

### Guidance

#### Relevant Statistics:

According to the National Fire Protection Association, space heaters contributed to 26% of all home fires in 2003, they were mostly deadly and accounted for 73% of fire deaths related to home heating. The U.S. Consumer Product Safety Commission (CPSC) estimates that in 1994, electric space heaters were associated with 2,400 fires resulting 80 deaths, 240 injuries and \$48.2 million in property loss.

A typical 1500 watt electric heater, operating December-March for an 8 hour period/40 hours per week, consumes approximately 960 kW of energy at a cost of about \$60, and generates over 1968 pounds of harmful greenhouse gases. For the above reasons, frequent use of space heaters is discouraged by the University.

#### Selection of Heaters

1. Only heaters that bear the label of Underwriter's Laboratory (UL) are acceptable. Note other labels are accepted, provided the equipment has been tested by a nationally recognized testing laboratory.
2. Heaters must be approved for the location where they will be used. Domestic- type fans should not be used in areas:
  - a. containing flammable liquids
  - b. Combustible dusts
  - c. Highly corrosive atmosphere
  - d. Wet location
3. All portable heaters must be properly guarded.
4. Portable space heaters are prohibited in laboratories.
5. Portable space heaters are prohibited in residential halls.

6. Open-coil space heaters, or space heaters that are fueled by kerosene, oil or produces an open flame, are prohibited.
7. Automatic Tip-Over/Shut-Off Function: The heater must be equipped with a safety tip-over shut-off function. This function will cause the appliance to automatically shut off if the heater should become overheated or is accidentally tipped over.
8. Heaters with unprotected elements are prohibited.

### Heater Use

1. Heaters that have been damaged or are malfunctioning must be taken out of service.
2. Portable space heaters must not be modified and any repairs must be performed by qualified personnel.
3. Heaters must be placed on stable, level surface.
4. Heaters should not be placed underneath desks, in any means of egress (exit path), or any high traffic area.
5. The use of any portable heater that is fueled by kerosene, or that produces open flame is strictly prohibited.
6. Heaters should be placed a minimum of 3 feet from any combustible material (i.e. curtains, paper, cloth, etc.) and in a well-ventilated area.
7. Heaters should be inspected frequently. They should be inspected on a weekly basis at a minimum by the user to ensure they are in good working condition.
8. Heaters must be turned off and unplugged when not in use and at the end of each business day.
9. Heaters must be monitored during operation, and should not be placed in unattended areas, such as storage rooms or other unoccupied areas.
10. Ensure heater is clean and not covered with dust before operation.
11. Avoid placing portable heaters near room thermostats.

### Electrical Safety

1. The power cord and any associated extension cord for the heater must be in good condition with no signs of damage. The power or extension cord should not:
  - a. create a trip hazard
  - b. be subject to excessive friction, crushing or wear
  - c. run through a doorway, window, or under a carpet/rug
  - d. looped over a nail or other sharp surfaces
  - e. placed in standing water
  - f. subject to hazardous chemicals (acids, bases, solvents) that could degrade the insulation
2. The power cord should be inspected periodically for damage to its insulation by the department that owns the fan. Note that Environmental Health and Safety checks (visual inspection) during routine hazard surveillance rounds.
3. The space heater power cord directly affixed to the unit shall be plugged into a wall outlet. The use of extension cords with space heaters is prohibited.

### Disclaimer

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